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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,546	12/02/2005	Brian Douglas Smith	P-356.36 (PCT) (US)	2962
7590 Thomas E Sisson Jackson Walker 112 E Pecan St Suite 2100 San Antonio, TX 78205			EXAMINER MONIKANG, GEORGE C	
			ART UNIT 2615	PAPER NUMBER
			MAIL DATE 11/28/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p align="center">10/559,546</p>	<p>Applicant(s)</p> <p align="center">SMITH ET AL.</p>	
	<p>Examiner</p> <p align="center">George C. Monikang</p>	<p>Art Unit</p> <p align="center">2615</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 31 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) 1-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 10/559546.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This office action is final due to the cancellation of all previous claims and the insertion of new claims 35-44. The new claims 35-44 have been analyzed and rejected accordingly.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 35-36 & 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Enamito et al, US Patent Pub. 2002/0041690 A1, in view of Shoureshi, US Patent 5,629,986.

Re Claim 35, Enamito et al discloses a noise control device for a glass window in a budding (para 0069), comprising an audio frequency sensor attachable to a surface of

said window (fig. 6; f1 & f2; para 0069), including processing means for detecting in a received signal a predetermined characteristic of noise external to said building (para 0069), for generating a cancellation signal and for supplying said cancellation signal to an audio frequency actuator coupled to the glass of the window and adapted to couple said signal into the glass to cause the glass to radiate the acoustic antiphase signal into the building to reduce the perceived intensity of the external noise in the building (para 0069); but fails to disclose an encoder interface adapted to receive signals from said audio frequency sensor. However, Shoureshi does (col. 4, lines 23-30).

Taking the combined teachings of Enamito et al and Shoureshi as a whole, one skilled in the art would have found it obvious to modify the noise control device for a glass window in a budding (para 0069), comprising an audio frequency sensor attachable to a surface of said window (fig. 6; f1 & f2; para 0069), including processing means for detecting in a received signal a predetermined characteristic of noise external to said building (para 0069), for generating a cancellation signal and for supplying said cancellation signal to an audio frequency actuator coupled to the glass of the window and adapted to couple said signal into the glass to cause the glass to radiate the acoustic antiphase signal into the building to reduce the perceived intensity of the external noise in the building (para 0069) of Enamito et al with an encoder interface adapted to receive signals from said audio frequency sensor as taught in Shoureshi (col. 4, lines 23-30) to control noise and vibration.

Re Claim 36, the combined teachings of Enamito et al and Shoureshi disclose a noise control device according to Claim 35, wherein the microphone and the acoustic actuator are combined into a single device (Enamito et al, para 0027).

Re Claim 38, the combined teachings of Enamito et al and Shoureshi disclose a noise control device according to claim 35, but fail to disclose wherein the predetermined characteristic is indicative of the noise of an airplane flying over said building. Official notice is taken that the concept of providing vibrations with an airplane is well known in the art. It would have been obvious to use an airplane to provide vibrations to the building since airplanes usually causes vibrations when flying close over buildings.

Re Claim 39, the combined teachings of Enamito et al and Shoureshi disclose a noise control device according to claim 35, but fail to disclose wherein the predetermined characteristic is indicative of traffic noise. Official notice is taken that the concept of providing vibrations with traffic noise is well known in the art. It would have been obvious to use traffic noise to provide vibrations to the building since traffic noise usually causes vibrations to buildings close to the traffic.

4. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Enamito et al, US Patent Pub. 2002/0041690 A1 and Shoureshi, US Patent 5,629,986, as applied to claim 36 above, in view of Wan, US Patent 5,978,489.

Re Claim 37, the combined teachings of Enamito et al and Shoureshi disclose the noise control device according to claim 36, but fails to disclose wherein said single device is a magnetostrictive actuator. However, Wan does (col. 2, lines 41-45).

Taking the combined teachings of Enamito et al, Shoureshi and Wan as a whole, one skilled in the art would have found it obvious to modify the noise control device according to Enamito et al and Shoureshi with wherein said single device is a magnetostrictive actuator as taught in Wan (col. 2, lines 41-45) so that the actuators could change their shapes when subjected to a magnetic field.

5. Claims 40, 42-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shoureshi, US Patent 5,629,986, in view of Hardy, US Patent 6,466,673 B1.

Re Claim 40, Shoureshi discloses a noise control device for reducing ambient noise levels adjacent to a surface (abstract), comprising a microphone for detecting ambient noise and for outputting an electrical signal corresponding thereto (col. 2, lines 57-62), an acoustic actuator coupled to said surface to couple an acoustic signal into said surface so that said surface emits sound in response thereto (abstract), and control means connected between the microphone and the acoustic actuator and programmed:

- (a) to receive the electrical signal from the microphone (col. 2, lines 57-62),
- (d) to generate an antiphase cancellation signal corresponding to said filtered signal (abstract); and
- (e) to send the antiphase cancellation signal to said actuator to cause the surface to radiate antiphase sound which reduces the ambient noise adjacent to the surface (abstract); but fails to disclose:
- (b) to detect in the signal speech adjacent to the microphone (Hardy, fig. 1: 52; col. 3, lines 65-67; col. 4, lines 18-27),
- (c) to filter out the speech elements of the signal (Hardy, fig. 1: 52; col. 3, lines 65-67; col. 4, lines 18-27). However, Hardy does.

Taking the combined teachings of Shoureshi and Hardy as a whole, one skilled in the art would have found it obvious to modify the noise control device for reducing ambient noise levels adjacent to a surface (abstract), comprising a microphone for detecting ambient noise and for outputting an electrical signal corresponding thereto (col. 2, lines 57-62), an acoustic actuator coupled to said surface to couple an acoustic signal into said surface so that said surface emits sound in response thereto (abstract), and control means connected between the microphone and the acoustic actuator and programmed:

- (a) to receive the electrical signal from the microphone (col. 2, lines 57-62),

(d) to generate an antiphase cancellation signal corresponding to said filtered signal (abstract); and

(e) to send the antiphase cancellation signal to said actuator to cause the surface to radiate antiphase sound which reduces the ambient noise adjacent to the surface (abstract) of Shoureshi with:

(b) to detect in the signal speech adjacent to the microphone (Hardy, fig. 1: 52; col. 3, lines 65-67; col. 4, lines 18-27),

(c) to filter out the speech elements of the signal (Hardy, fig. 1: 52; col. 3, lines 65-67; col. 4, lines 18-27) as taught in Hardy to filter the speech.

Re Claim 42, the combined teachings of Shoureshi and Hardy disclose a noise control device according to Claim 40, but fail to disclose wherein the surface is a table top. Official notice is taken that the concept of reducing noise vibration on a table surface is well known in the art. It would have been obvious to use a table since tables usually vibrate.

Re Claim 43, the combined teachings of Shoureshi and Hardy disclose a noise control device according to Claim 40, but fail to disclose wherein the surface is a wall panel. Official notice is taken that the concept of reducing noise vibration on a wall panel is well known in the art. It would have been obvious to use a wall panel since wall panels usually vibrate.

Re Claim 44, the combined teachings of Shoureshi and Hardy disclose a noise control device according to Claim 40, wherein the control means is selectively operable to output a random sound signal such as white noise or pink noise adapted to provide a degree of masking of the ambient noise (Shoureshi, col. 8, lines 36-44).

6. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shoureshi, US Patent 5,629,986 and Hardy, US Patent 6,466,673 B1, as applied to claim 40 above, in view of Wan, US Patent 5,978,489.

Re Claim 41, the combined teachings of Shoureshi and Hardy disclose a noise control device according to Claim 40, but fail to disclose wherein the actuator is a magnetostrictive actuator. However, Wan does (col. 2, lines 41-45).

Taking the combined teachings of Shoureshi, Hardy and Wan as a whole, one skilled in the art would have found it obvious to modify the noise control device according to Shoureshi and Hardy with wherein the actuator is a magnetostrictive actuator as taught in Wan (col. 2, lines 41-45) so that the actuators could change their shapes when subjected to a magnetic field.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George C. Monikang whose telephone number is 571-270-1190. The examiner can normally be reached on M-F. alt Fri. Off 7:30am-5:00pm (est).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

George Monikang

11/26/2007

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XU MEI
PRIMARY EXAMINER